

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.-9. (Cancelled)

10. (Currently Amended) ~~The method of claim 8 including A~~ method of enhancing a digital image comprising:

providing a digital image;

decomposing the provided digital image into a multi-frequency band representation of four frequency bands as follows:

a lowest frequency band image which represents large-sized features in the digital image;

a low-to-mid frequency band image which represents mid-sized features in the digital image;

a mid-to-high frequency band image which represents the small-sized features in the digital image; and

a highest frequency band which represents very fine detail in the digital image;

manipulating said low-to-mid frequency band image to produce a contrast effect without affecting the overall dynamic range of said digital image;

multiplying each of said high-frequency band images with a gain factor;

summing together said unmodified low frequency band image and said modified high-frequency band images to produce a reconstructed digital image; and

mapping said reconstructed digital image through a tone-scale look-up-table to map said reconstructed digital image to optical densities.

11.-15. (Canceled)

16. (Currently Amended) ~~The method of claim 8~~ A method of enhancing a digital image comprising:

providing a digital image;
decomposing the provided digital image into a multi-frequency
band representation of four frequency bands as follows:
a lowest frequency band image which represents large-
sized features in the digital image;
a low-to-mid frequency band image which represents mid-
sized features in the digital image;
a mid-to-high frequency band image which represents the
small-sized features in the digital image; and
a highest frequency band which represents very fine detail
in the digital image;
multiplying each of said high-frequency band images with a gain
factor, wherein said gain factor which multiplies said low-to-mid frequency band
image is derived from a detail contrast control and said a dynamic range control;
summing together said unmodified low frequency band image and
said modified high-frequency band images to produce a reconstructed digital
image; and
mapping said reconstructed digital image through a tone-scale
look-up-table to map said reconstructed digital image to optical densities.

17. (Currently Amended) ~~The method of claim 8~~ A method of
enhancing a digital image comprising:

providing a digital image;
decomposing the provided digital image into a multi-frequency
band representation of four frequency bands as follows:
a lowest frequency band image which represents large-
sized features in the digital image;
a low-to-mid frequency band image which represents mid-
sized features in the digital image;
a mid-to-high frequency band image which represents the
small-sized features in the digital image; and
a highest frequency band which represents very fine detail
in the digital image;

multiplying each of said high-frequency band images with a gain factor, wherein said gain factor which multiplies said mid-to-high frequency band image is derived from a sharpness control and said gain factor which multiplies said low-to-mid frequency band image;

summing together said unmodified low frequency band image and said modified high-frequency band images to produce a reconstructed digital image; and

mapping said reconstructed digital image through a tone-scale look-up-table to map said reconstructed digital image to optical densities.

18. (Currently Amended) ~~The method of claim 8~~ A method of enhancing a digital image comprising:

providing a digital image;

decomposing the provided digital image into a multi-frequency band representation of four frequency bands as follows:

a lowest frequency band image which represents large-sized features in the digital image;

a low-to-mid frequency band image which represents mid-sized features in the digital image;

a mid-to-high frequency band image which represents the small-sized features in the digital image; and

a highest frequency band which represents very fine detail in the digital image;

multiplying each of said high-frequency band images with a gain factor, wherein said gain factor which multiplies said highest frequency band image is derived from a fine detail control and said gain factor which multiplies the mid-to-high frequency band image;

summing together said unmodified low frequency band image and said modified high-frequency band images to produce a reconstructed digital image; and

mapping said reconstructed digital image through a tone-scale look-up-table to map said reconstructed digital image to optical densities.

19. (Canceled)

20. (Currently Amended) ~~The method of claim 8~~ A method of enhancing a digital image comprising:
providing a digital image;
decomposing the provided digital image into a multi-frequency band representation of four frequency bands as follows:
a lowest frequency band image which represents large-sized features in the digital image;
a low-to-mid frequency band image which represents mid-sized features in the digital image;
a mid-to-high frequency band image which represents the small-sized features in the digital image; and
a highest frequency band which represents very fine detail in the digital image;
multiplying each of said high-frequency band images with a gain factor, wherein said gain factors which multiply said higher frequency bands are a function of said lowest frequency band image;
summing together said unmodified low frequency band image and said modified high-frequency band images to produce a reconstructed digital image; and
mapping said reconstructed digital image through a tone-scale look-up-table to map said reconstructed digital image to optical densities.

21. (Original) The method of claim 16 wherein said detail contrast control is a function of said lowest frequency band image (which represents average log exposure).

22. (Original) The method of claim 21 wherein the functional form of said detail contrast control is a piecewise linear curve with breakpoints.

23. (Original) The method of claim 22 wherein said breakpoints are first assigned in density and then mapped to log exposure breakpoints via said tone scale curve providing density dependent control of the detail contrast of said image.

24. (Original) The method of claim 17 wherein the said sharpness control is a function of said lowest frequency band image (which represents an average log exposure).

25. (Original) The method of claim 24 wherein the functional form of said sharpness control is a piecewise linear curve with breakpoints.

26. (Original) The method of claim 25 wherein said breakpoints are first assigned in density and then mapped to log exposure breakpoints via said tone scale curve providing density dependent control of the sharpness of small detail of said image.

27. (Original) The method of claim 18 wherein said fine detail control is a function of the lowest frequency band image (which represents an average log exposure).

28. (Original) The method of claim 27 wherein the functional form of said fine detail control is a piecewise linear curve with breakpoints.

29. (Original) The method of claim 28 wherein said breakpoints are first assigned in density and then mapped to log exposure breakpoints via said tone scale curve providing density dependent control of the sharpness of fine detail of said image.

30. (Canceled)

31. (Original) The method of claim 16 wherein manipulation of said detail contrast control does not affect the overall dynamic range or sharpness of small or fine detail of said image.

32.-39. (Canceled)